# 2020 GREEN INFRASTRUCTURE IMPROVEMENT PROJECT

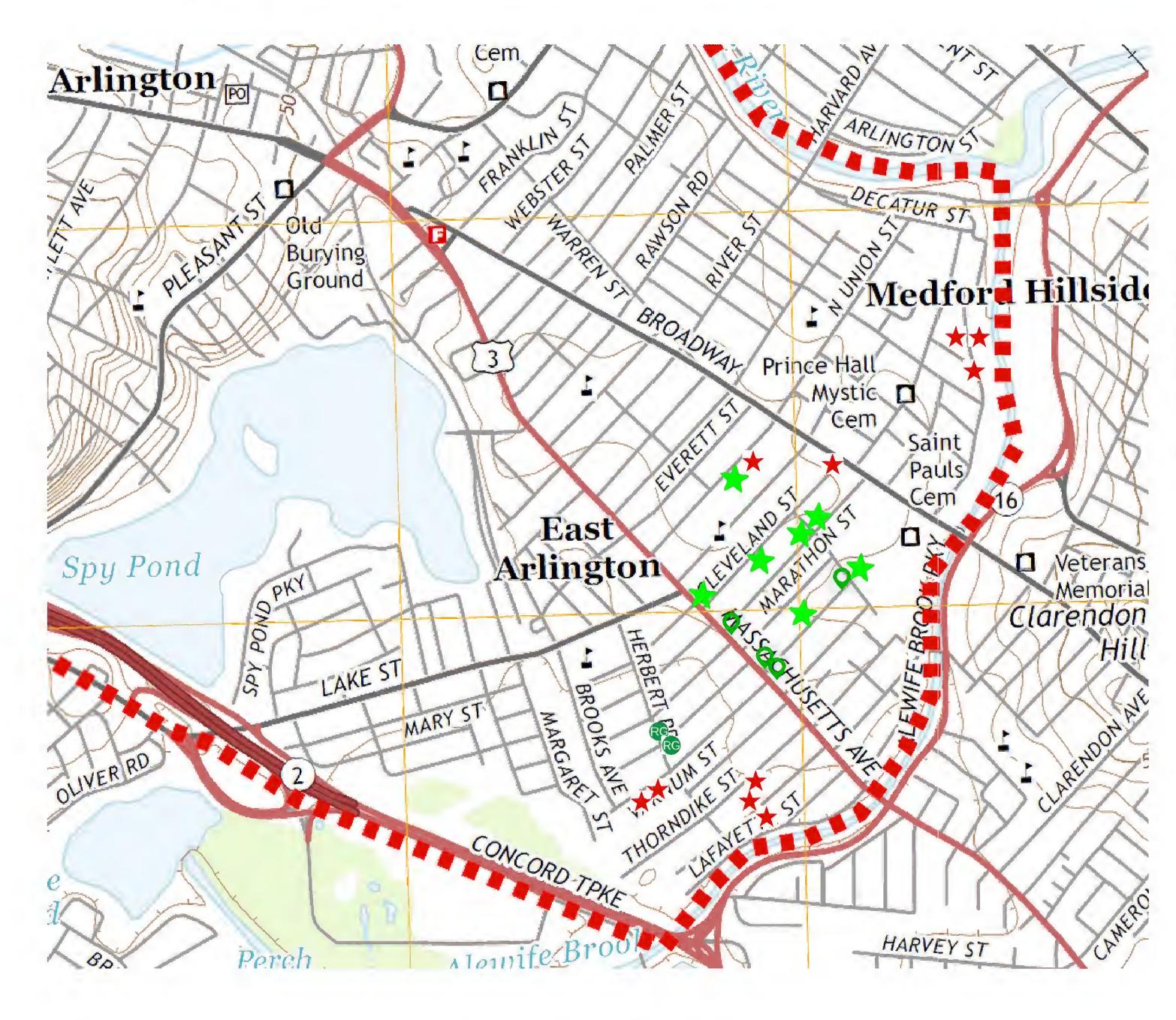
### **Project Partners:**



TOWN OF ARLINGTON **Department of Public Works** 51 Grove St. Arlington, MA 02476



Massachusetts Office of Coastal Zone Management 251 Causeway Street, Ste. 800 Boston, MA 02114



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**Mystic River Watershed Association** 20 Academy St., Ste. 306 Arlington, MA 02476

#### **Project BMP Information:**

#### \* Street Infiltration Trench; Quantity = 10 Location

89 Oxford St.

68 Broadway (at Cleveland St.)

88 Sunnyside Ave.

106 Sunnyside Ave.

109 Sunnyside Ave.

44 - 46 Fairmont St.

45 Fairmont St.

54 Thorndike St.

100 Varnum St.

114 - 116 Varnum St.

### Green Trench: Quantity = 7

opposite 58-60 Oxford St.

12 Cleveland St.

35 Cleveland St.

54 Marathon St. (at Waldo)

62 Marathon St. (at Waldo)

40 Waldo Rd.

39 Trowbridge St.

#### **O** Tree Trench: Quantity = 4

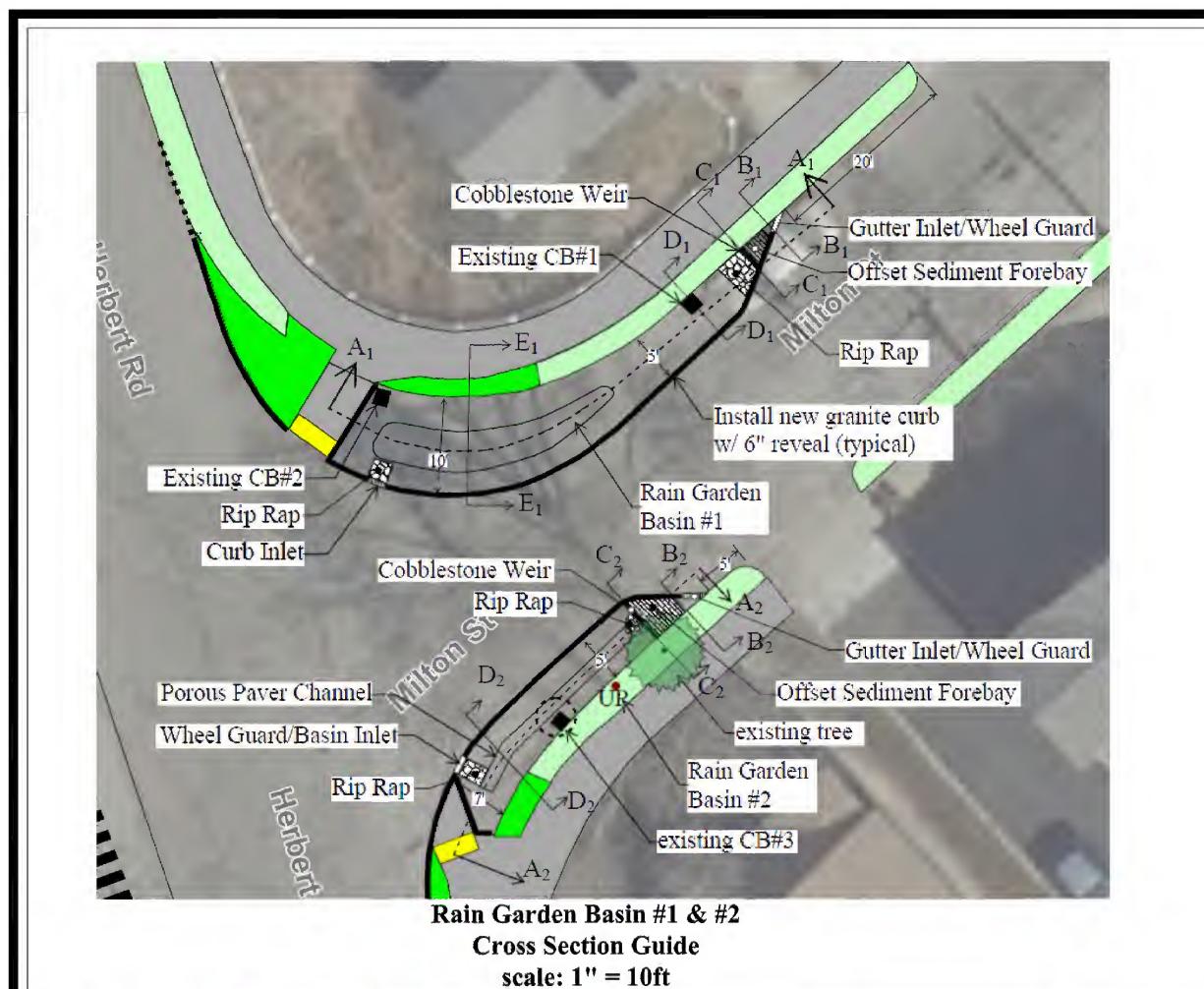
opposite 36 Waldo Rd.

155 Mass Ave. (at Windsor St.)

115 Mass Ave. (at Windsor St.)

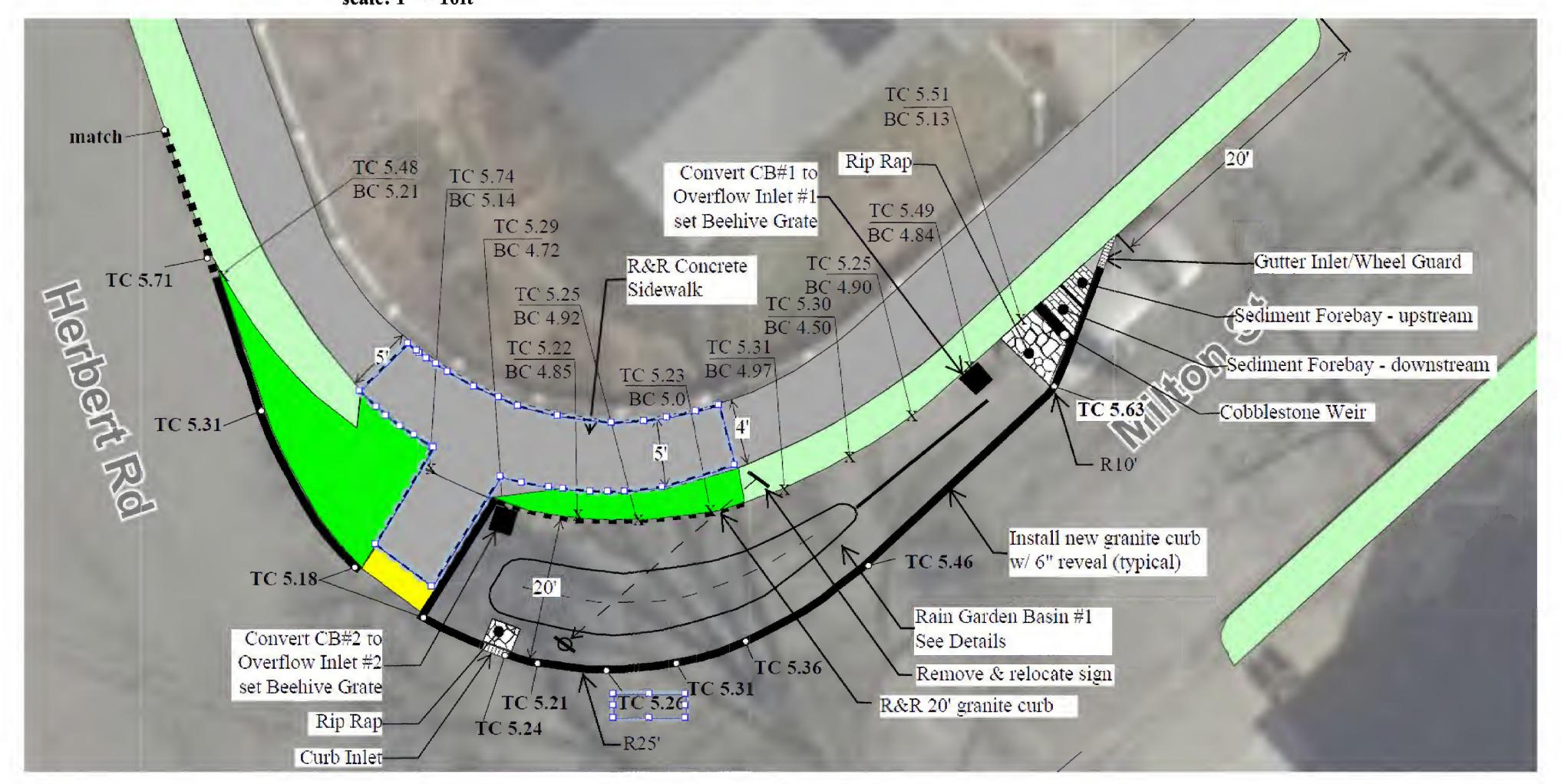
121 Mass Ave. (at Marathon St.)

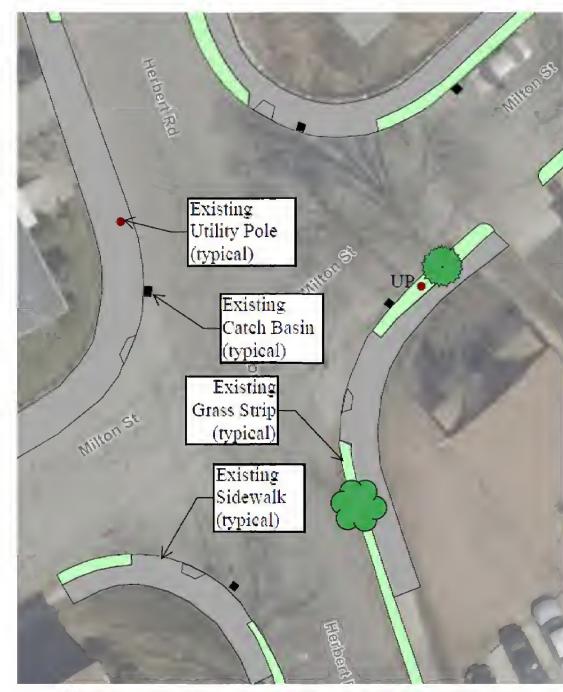
Rain Garden; Quantity = 2 Intersection of Milton St. & Herbert Rd.



Concrete sidewalk to be removed and replaced with 5' wide ADA compliant ramps and sidewalks Asphalt road to be removed. partial Curb Remove & Stack Set new or reused curb and replaced with 5' wide ADA compliant ramps and sidewalks Rain Garden Basin #1 See Rain Garden Details Remove & reset existing granite Set new &/or reused granite curb w/6" reveal (typical) Rain Garden Basin #2 (See Rain Garden Details) Remove & reset existing granite curb w/6" reveal Remove existing granite curb & stack for re-use (typical) Concrete sidewalk to be removed Remove & reset existing granite and replaced with 5' wide ADA curb w/6" reveal (typical) compliant ramps and sidewalks with 30" grass strip (typical

MILTON - HERBERT INTERSECTION
Proposed Curb & Walk Modifications
Scale: 1" = 20ft

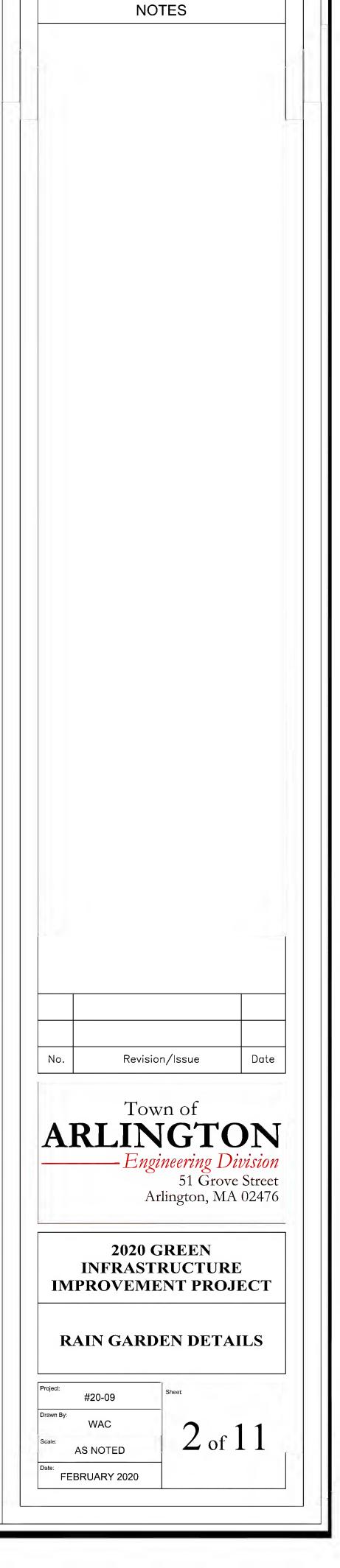


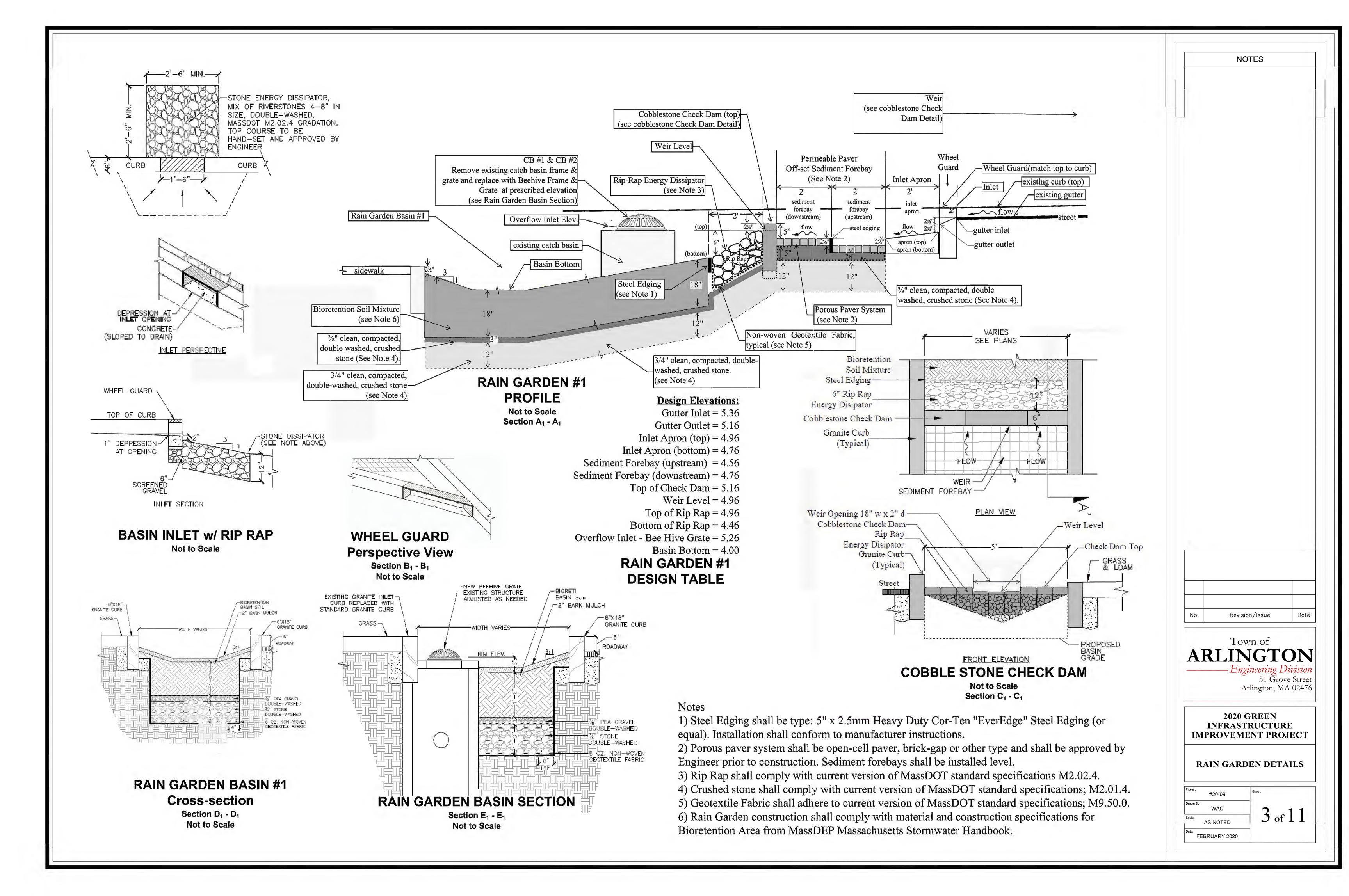


MILTON - HERBERT INTERSECTION
Existing Curb & Walk Conditions
scale: 1" = 20ft

RAIN GARDEN BASIN #1 SCHEMATIC

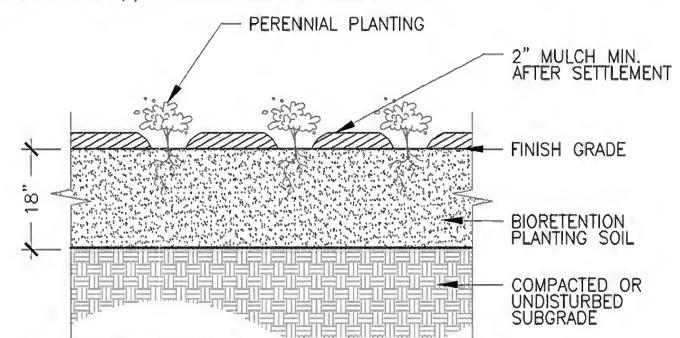
Scale: 1" = 5ft





I. NO PLANTING MATERIALS SHALL BE INSTALLED PRIOR TO ACCEPTANCE OF GRADING BY THE OWNERS

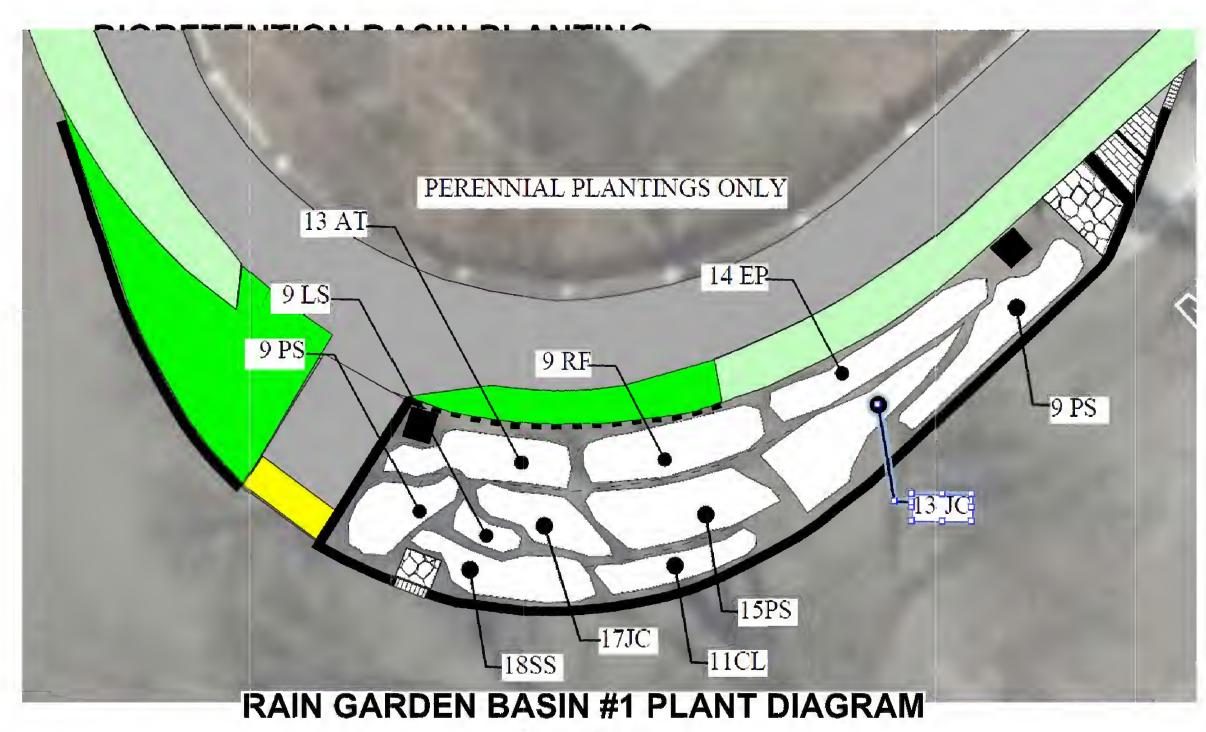
- ALL DISTURBED AREAS SHALL RECEIVE THE FOLLOWING TREATMENT: SCARIFY SUBSOIL WITH RAKE, APPLY TOPSOIL AND ROLL WITH WATER FILLED LAWN ROLLER TO DEPTH OF THREE INCHES (3") AFTER COMPACTION, RAKE/SCARIFY SURFACE OF TOPSOIL, APPLY OWNER APPROVED TURF SEED MIX BY HAND OR USING BRILL-TYPE SEEDER (2 APPLICATIONS 90 DEGREES FROM ONE ANOTHER), COMPACT SURFACE WITH LAWN ROLLER.
- ALL PLANTS SHALL BE STRAIGHT SPECIES, NO CULTIVARS SHALL BE USED, UNLESS OTHERWISE NOTED.
- 4. ALL PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN SOCIETY OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
- 5. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING
- 6. ANY PROPOSED SUBSTITUTION OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE AND ONLY AFTER WRITTEN APPROVAL BY
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED, STOLEN, DEAD, DECLINING OR LOST MATERIAL UNTIL COMPLETION OF THE (1) YEAR MAINTENANCE AND GUARANTEE PERIOD.



	Bioretention Area Material Spe	eifications
Material	Specification	Notes
Filter Media Soil	Filter Media to contain:  • 40% Sand  • 20-30% topsoil (<5% clay)  • 30-40% compost  Organic content is to be 1.5% to 3%.  Volume of material is to be 110% of plan volume to account for settling or compaction.	Sand should be gravelly sand using ASTM D422.  Topsoil shall be a USDA soil type sandy loam, loamy sand or loam texture.  Compost must be processed from yard waste per MassDEP Guidelines.
Mulch Layer	Fine shredded hardwood mulch. Well-aged (6 months minimum.	2-ineh layer on the surface of the filter media soil, mixed 1 inches into the filter media soil.
Filter Fabrie	Non-woven geotextile fabric with flow rate of > 110 gallons/minute/square foot.	
Erosion Control Blanket	Woven, 100% biodegradable jute fiber, 7.7 lbs./1000 sq. ft.	To be used on bioretention area side slopes > 3:1.
Plant Material	All plant materials shall conform to the guidelines of the "American Standard for Nursery Stock", latest edition.	Plant species and quantities per the plans.
Grass Seed	Use seed mix from Item 765.6 for side slopes.	Application rate of 25 lbs./acre or per seed manufacture's

#### RAIN GARDEN SPECIFICATIONS

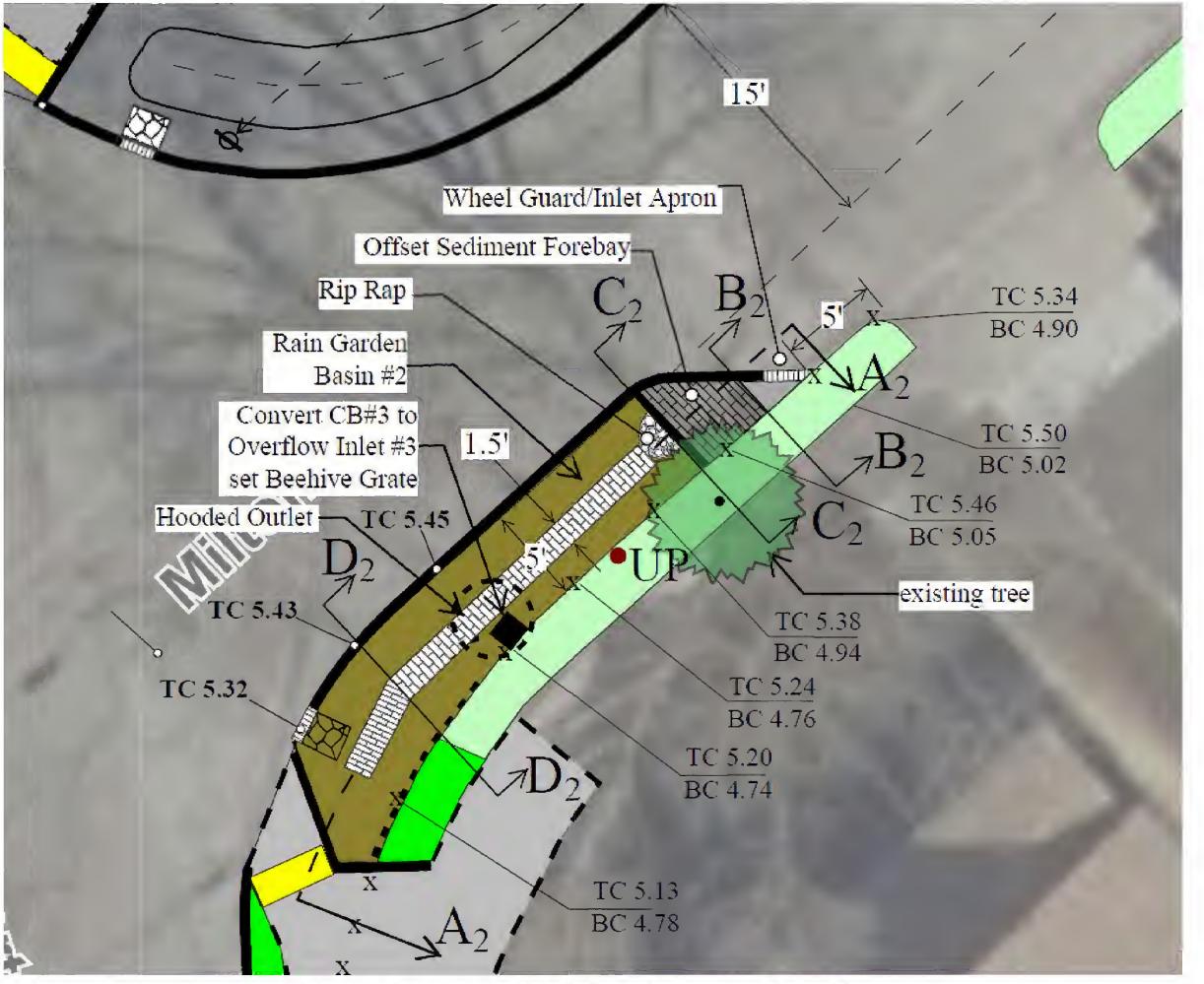
#### RAIN GARDEN DETAIL AND NOTES



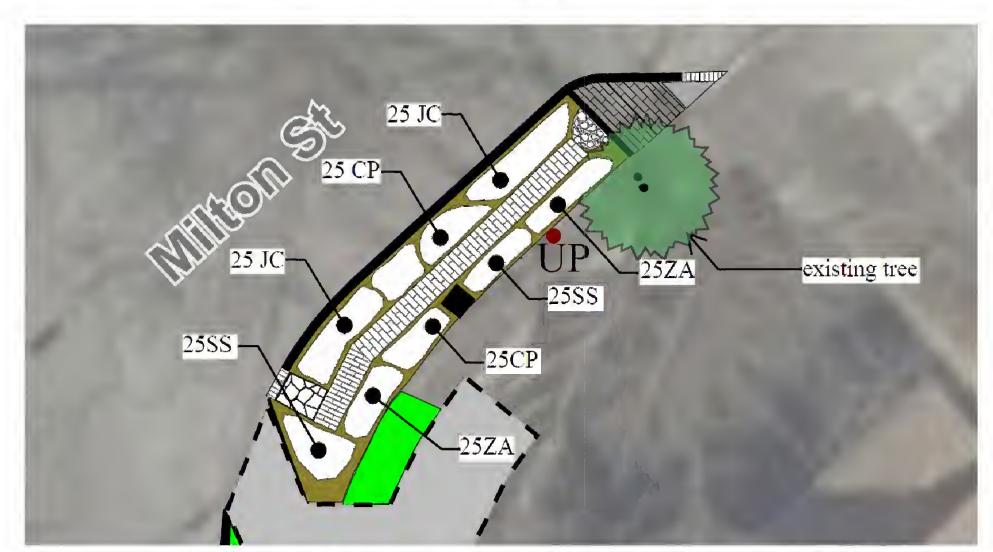
Not to Scale

PLAN	T SCHE	DULE			
QTY	SYM	SCIENTIFIC NAME	COMMON NAME	CONTAINER	COMMENTS
22	AT	Asclepias tuberosa	Butterfly Weed	Quart	12" O.C.
24	CL	Chasmanthium latifolia	Northern Sea Oats	#1 cont.	15" O.C.
22	EP	Echinacea purpurea	Purple Cone Flower	Quart	12" O.C.
50	JC	Juncus canadensis	Canada Rush	Quart	12" O.C.
9	LS	Liatris spicata	Gayfeather	Quart	12" O.C.
62	PS	Panicum virgatum	Switchgrass	#2 cont.	15" O.C.
16	RF	Rudbeckia fulgida	Black Eyed Susan	#1 cont.	15" O.C.
36	SS	Schizachyrium scoparium	Little Bluestem	Quart	12" O.C.

**RAIN GARDEN #1 PLANT LIST** 



**RAIN GARDEN BASIN #2 SCHEMATIC** Scale 1'' = 5 ft



**RAIN GARDEN BASIN #2 PLANT DIAGRAM** 

Not to Scale

PLAN	T SCHE	DULE			
QTY	SYM	SCIENTIFIC NAME	COMMON NAME	CONTAINER	COMMENTS
50	SS	Schizachyrium scoparium	Little Bluestem	Quart	12" O.C.
50	JC	Juncus canadensis	Canadian Rush	Quart	12" O.C.
50	СР	Carex pensylvanica	Pennsylvania Sedge	Quart	12" O.C.
50	GA	Zizia aurea	Golden Alexanders	Quart	12" O.C.

**RAIN GARDEN #2 PLANT LIST** 

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No.	Revision/Issue	Date
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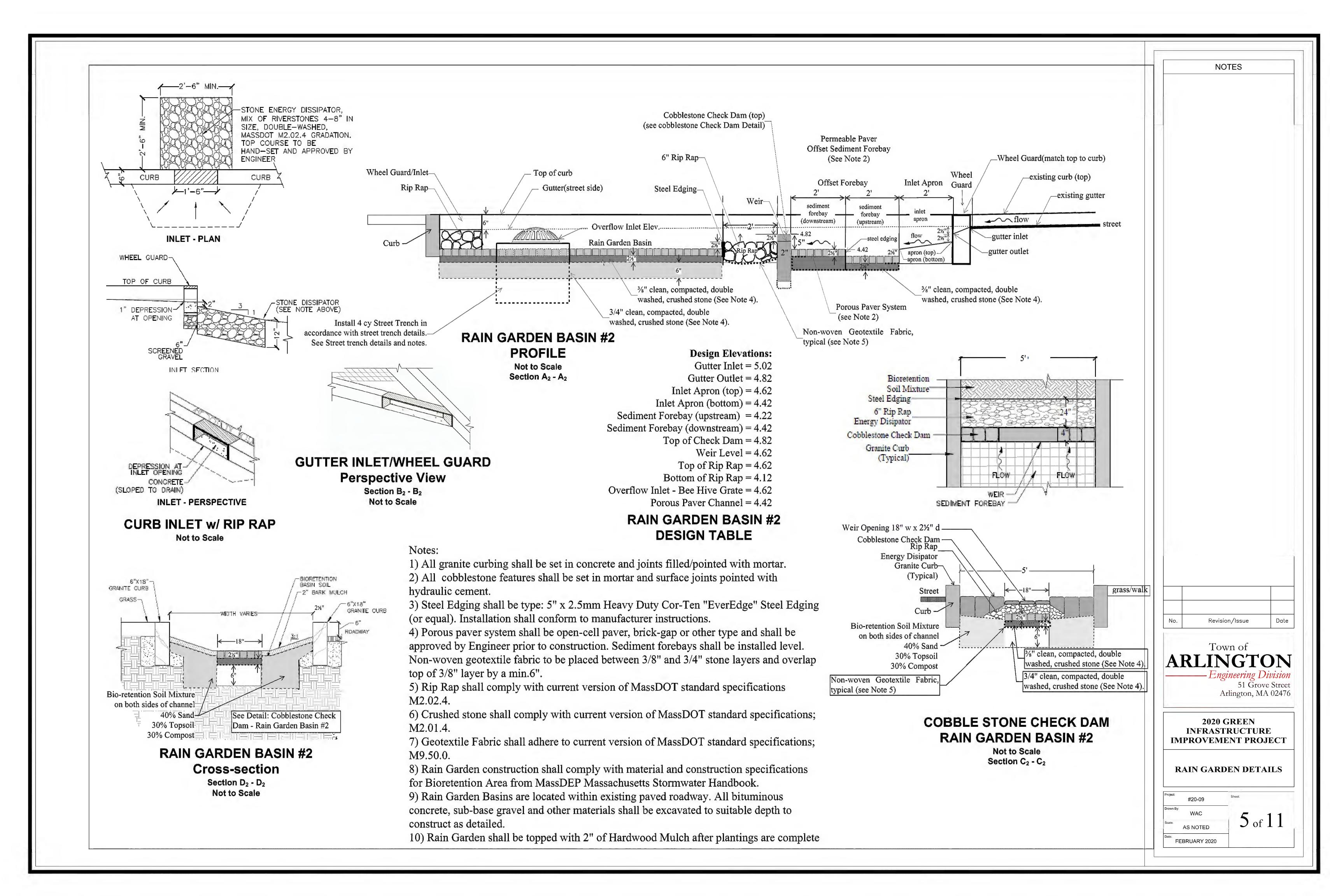
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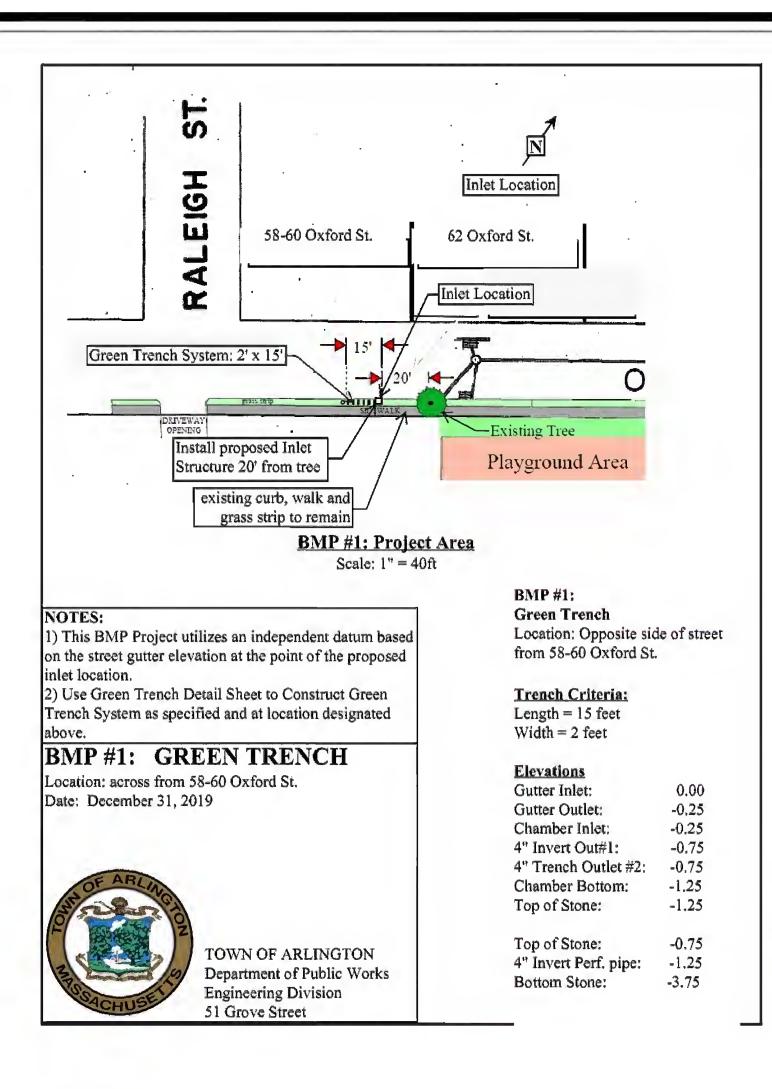
Arlington, MA 02476

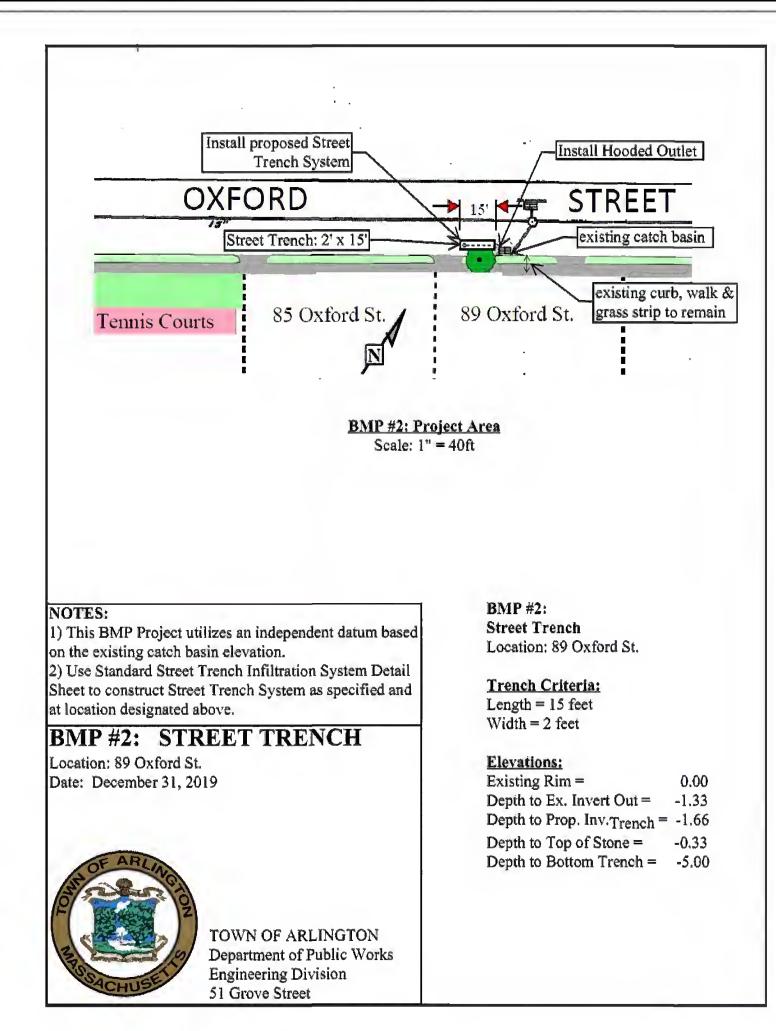
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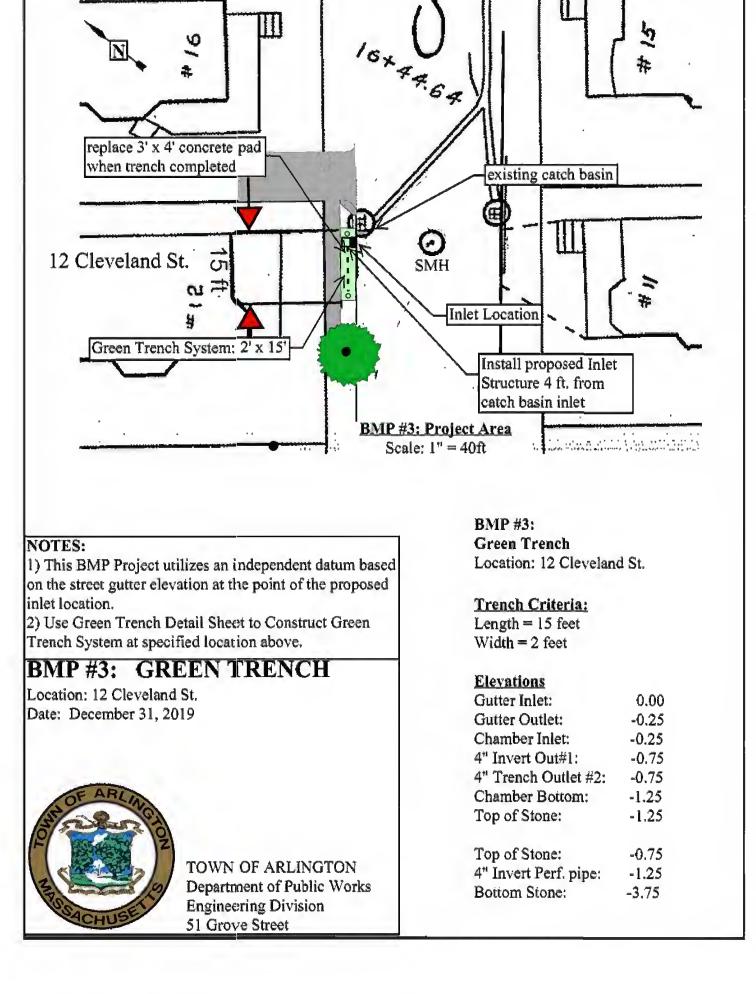
RAIN GARDEN DETAILS

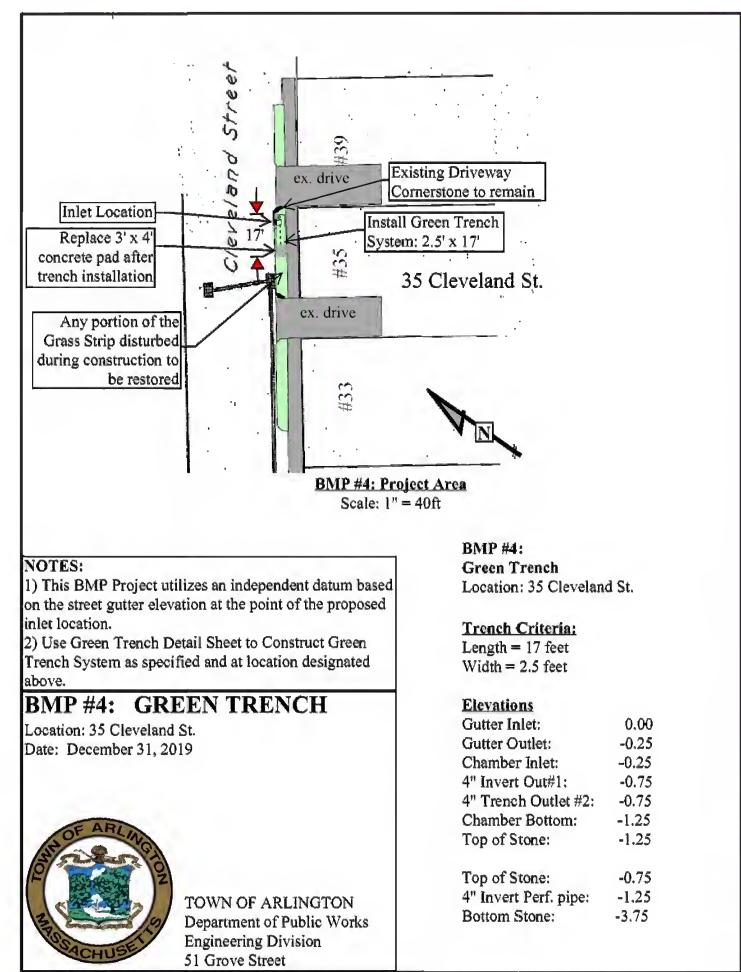
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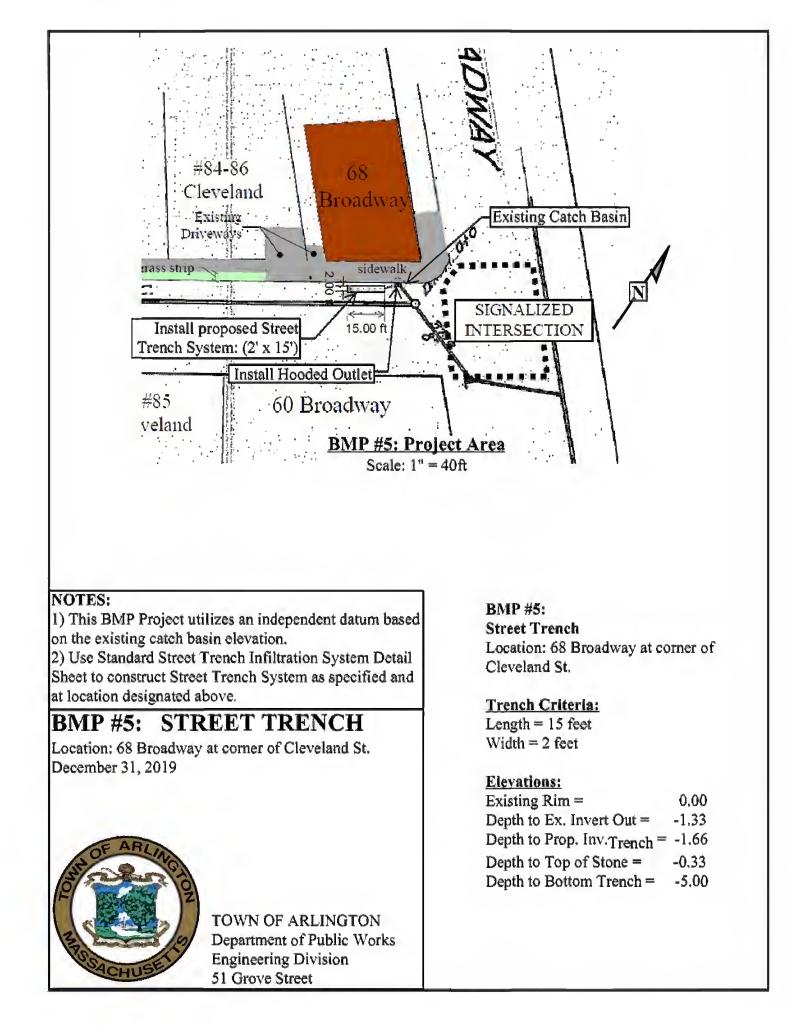


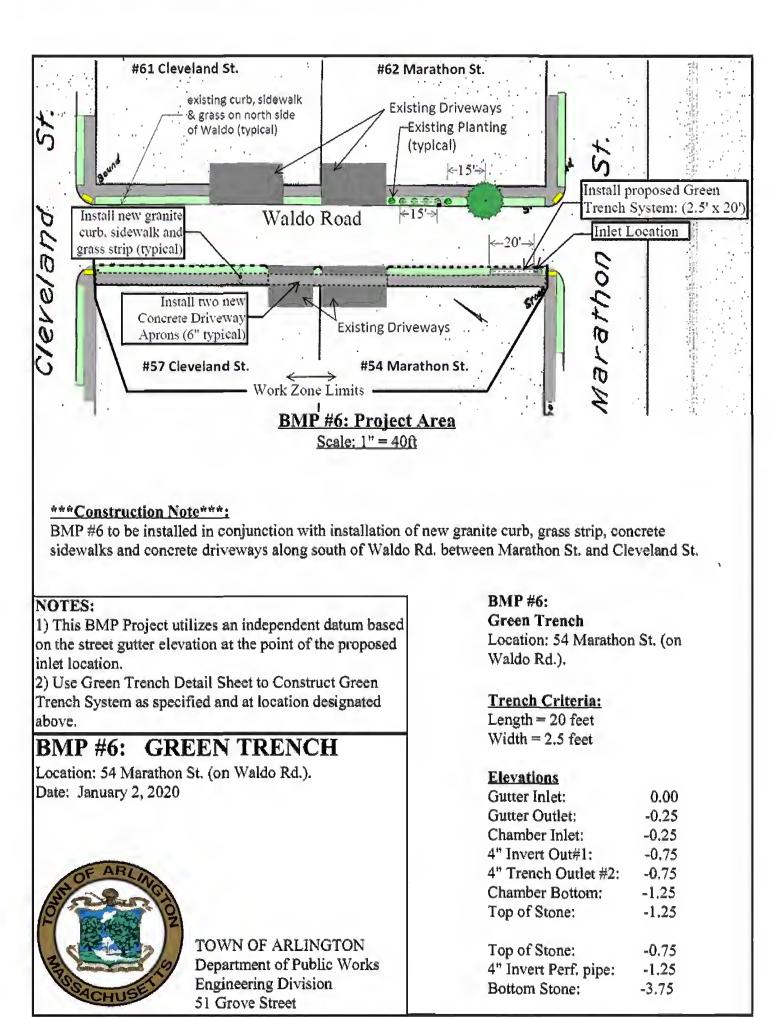


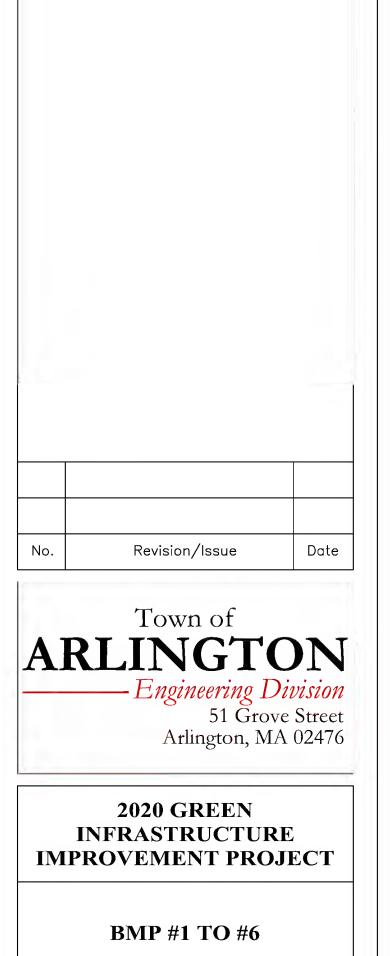












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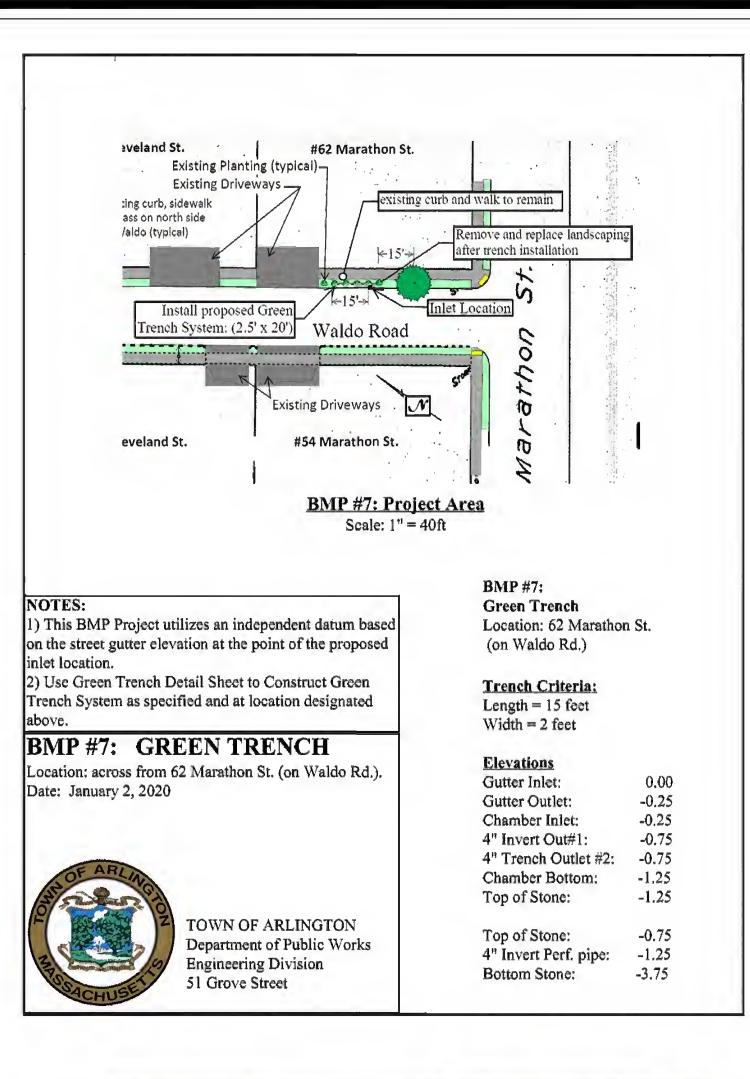
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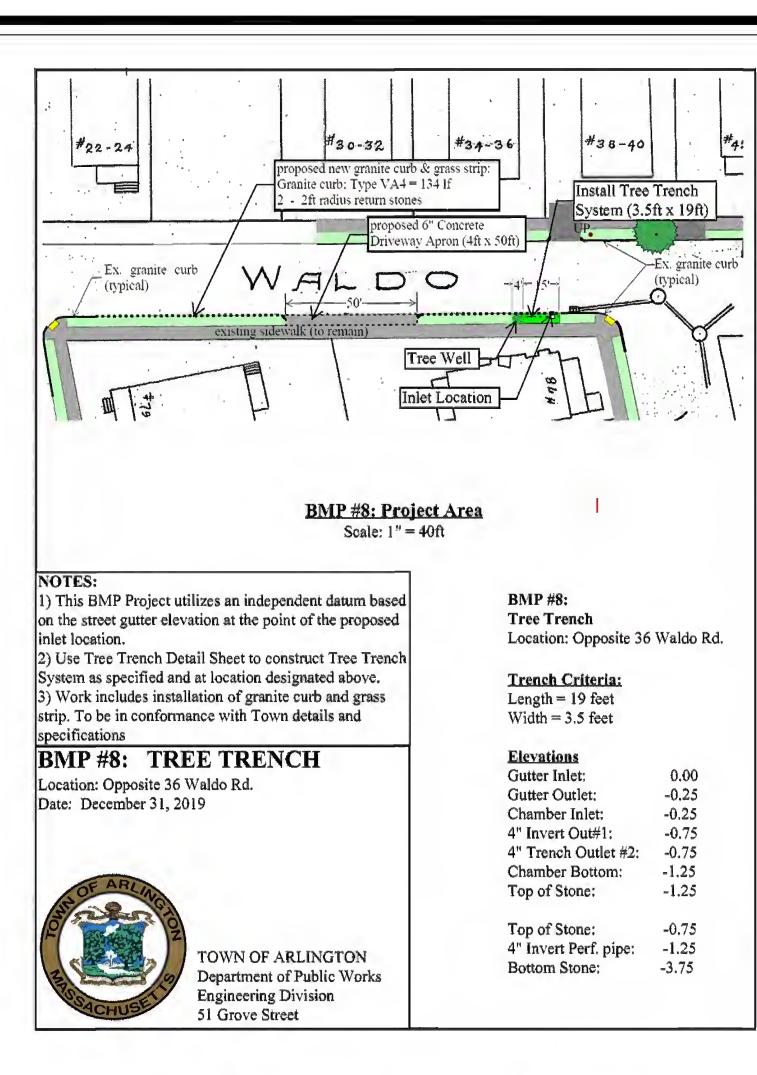
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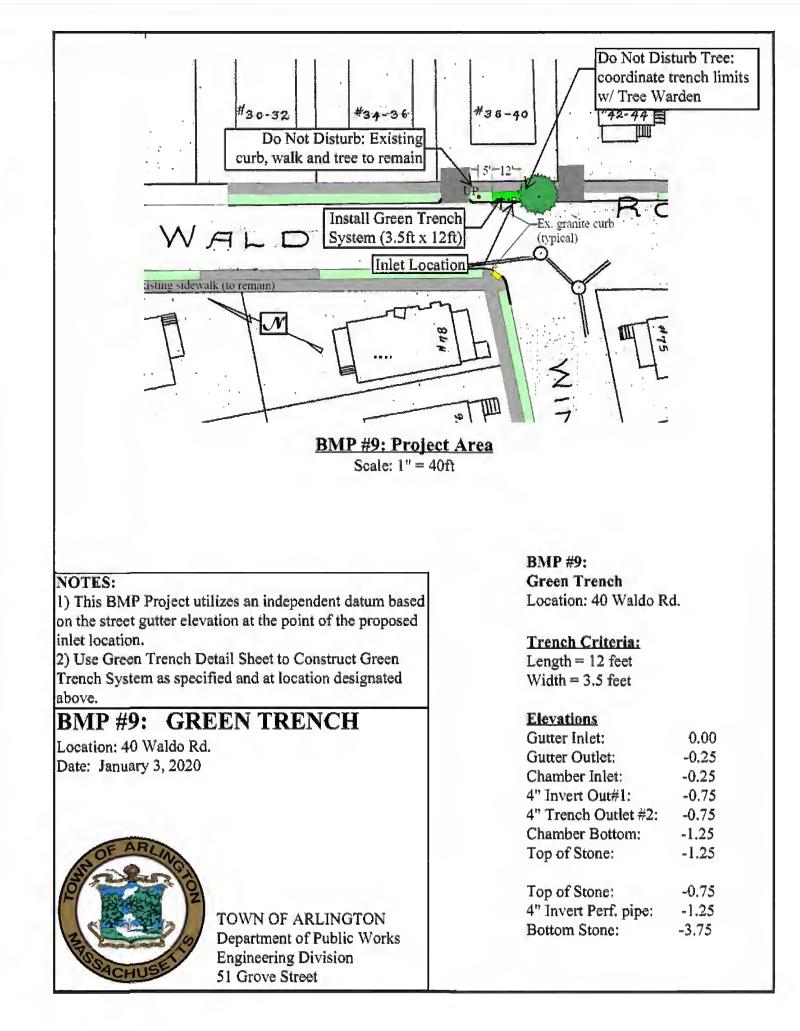
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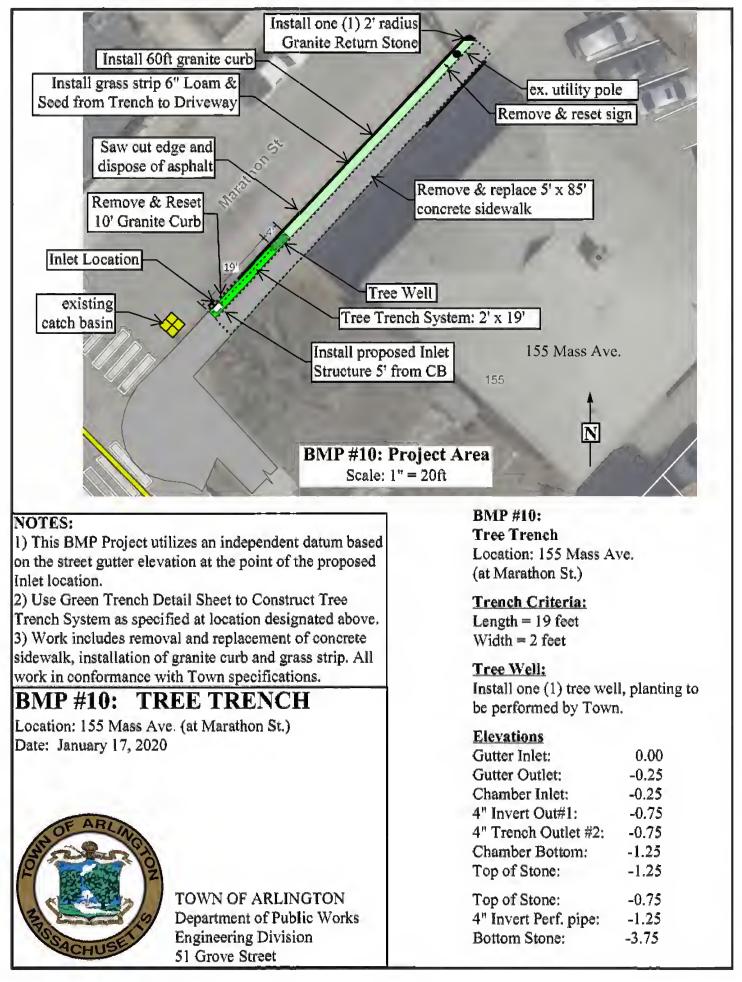
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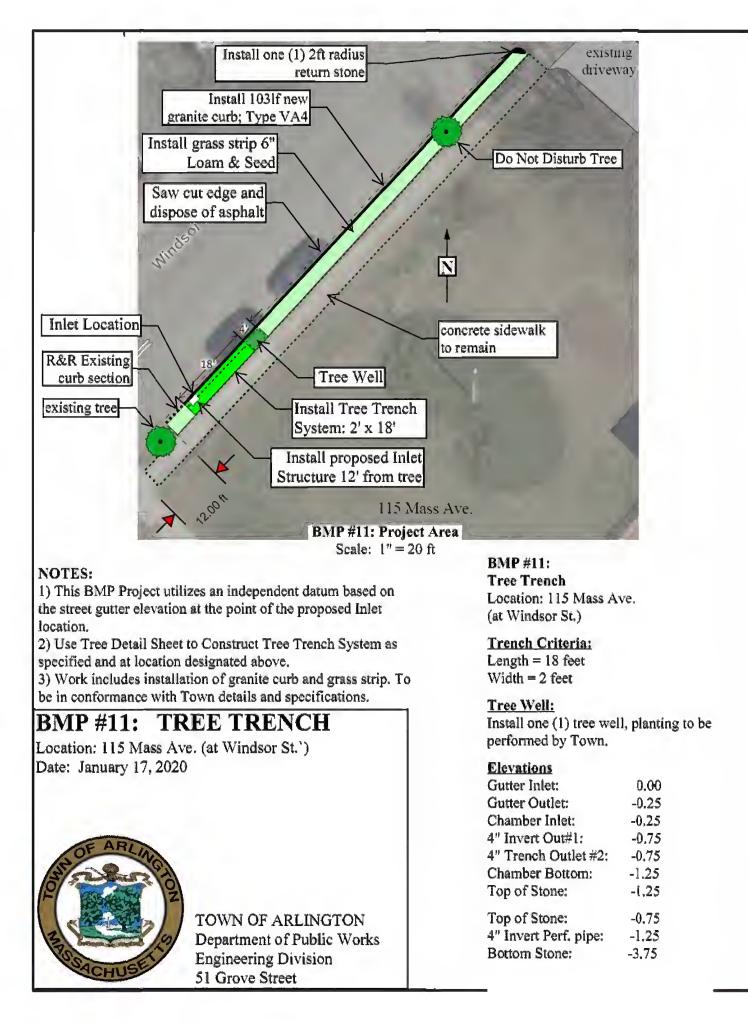
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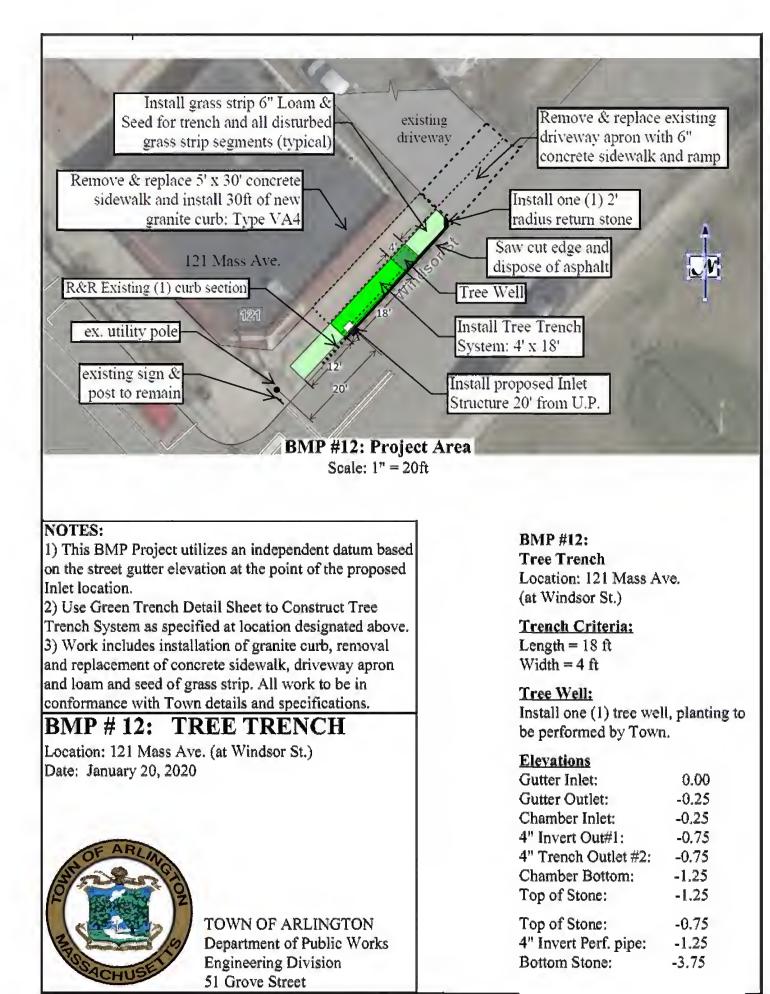


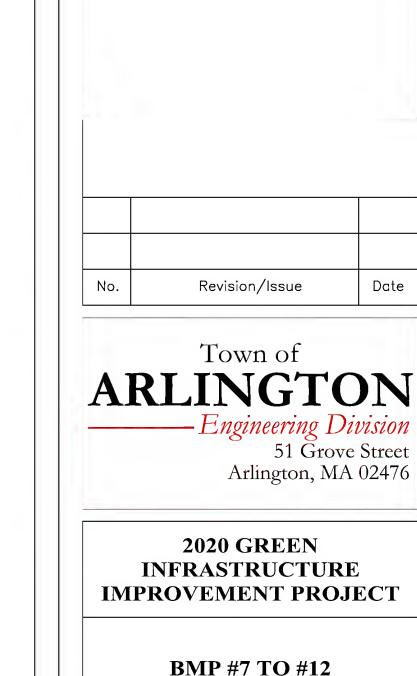












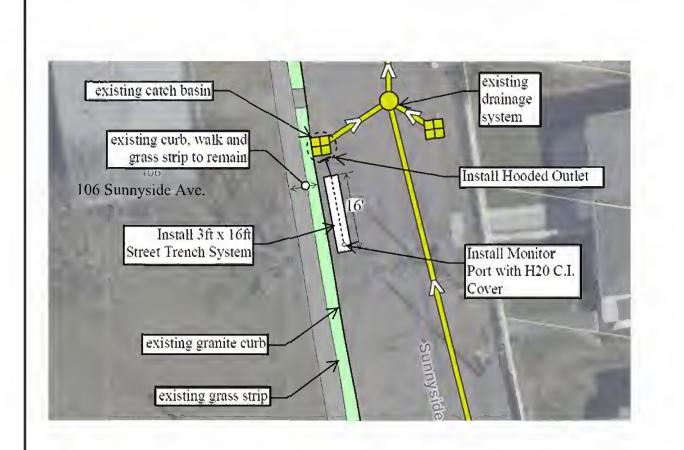
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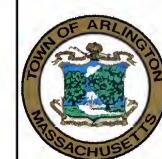
NOTES



1) This BMP Project utilizes an independent datum based on the existing catch basin elevation. 2) Use Standard Street Trench Infiltration System Detail Sheet to construct Street Trench System as specified at location designated above.

BMP #13: STREET TRENCH

Location: 106 Sunnyside Ave. Date: January 20, 2020



TOWN OF ARLINGTON Department of Public Works Engineering Division 51 Grove Street

BMP #13:

Trench Criteria: Length = 16 ft Width = 3 ft

**Elevations:** Existing Rim = Depth to Ex. Invert Out = -1.33Depth to Prop. Inv. Trench = -1.66 Depth to Top of Stone = -0.33

Depth to Bottom Trench = -5.00

Street Trench Location: 106 Sunnyside Ave.

NOTES:

TOWN OF ARLINGTON Department of Public Works Engineering Division 51 Grove Street

nstall Hooded Outle

Install 3ft x 14ft x

Street Trene

1) This BMP Project utilizes an independent datum based

2) Use Standard Street Trench Infiltration System Detail

Sheet to construct trench at specified location above.

BMP #14: STREET TRENCH

on the existing catch basin elevation.

Location: 109 Sunnyside Ave.

Date: January 28, 2019

BMP #14: Street Trench

Location: 109 Sunnyside Ave.

Trench Criteria: Length = 14 feet Width = 3 feet

existing Catch Basin

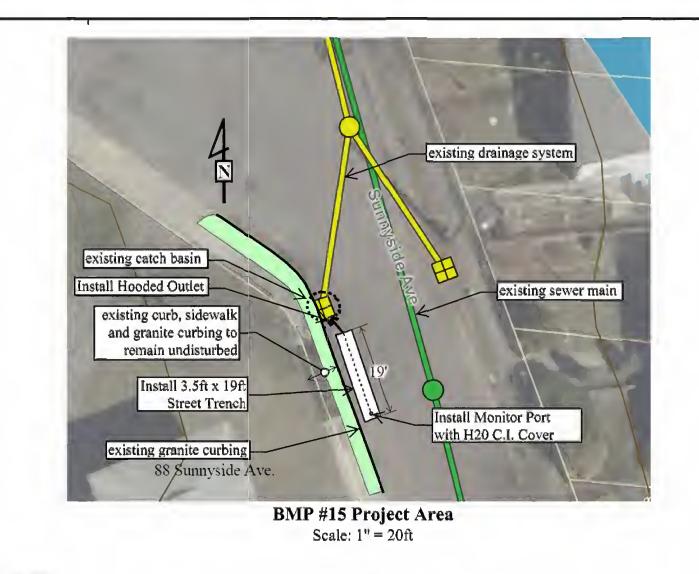
sidewalk to remain

Port with H20 C.I.

Install Monitor

BMP #14 Project Area Scale: 1'' = 20ft

> **Elevations:** Existing Rim = 0.00 Depth to Ex. Invert Out = -1.33Depth to Prop. Inv. Trench = -1.66 Depth to Top of Stone = -0.33 Depth to Bottom Trench = -5.00



1) This BMP Project utilizes an independent datum based on the existing catch basin elevation. 2) Use Standard Street Trench Infiltration System Detail Sheet to construct trench at specified location above.

BMP #15: STREET TRENCH

Location: 88 Sunnyside Ave. Date: January 28, 2019

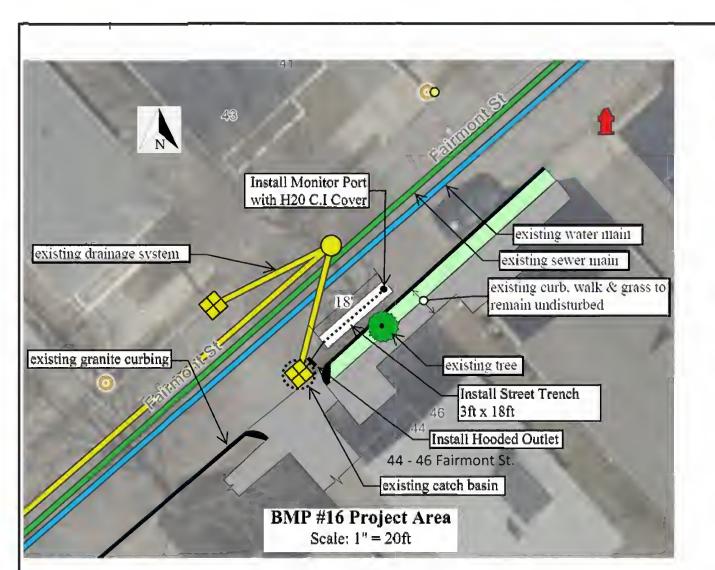


TOWN OF ARLINGTON Department of Public Works **Engineering Division** 51 Grove Street

BMP #15: Street Trench Location: 88 Sunnyside Ave.

Trench Criteria: Length = 19 feet Width = 3.5 feet

Design Elevations:	
Elevation: Existing Rim =	0.00
Ex. Invert Out =	-2.92 ft
Prop. Inv.Trench =	-3.17 ft
Top of Stone =	-0.33 ft
Bottom Trench =	-5.00 ft



1) This BMP Project utilizes an independent datum based on the existing catch basin elevation.

2) Use Standard Street Trench Infiltration System Detail Sheet to construct trench at specified location above.

BMP #16: STREET TRENCH

Location: 44 - 46 Fairmont St. Date: January 29, 2019

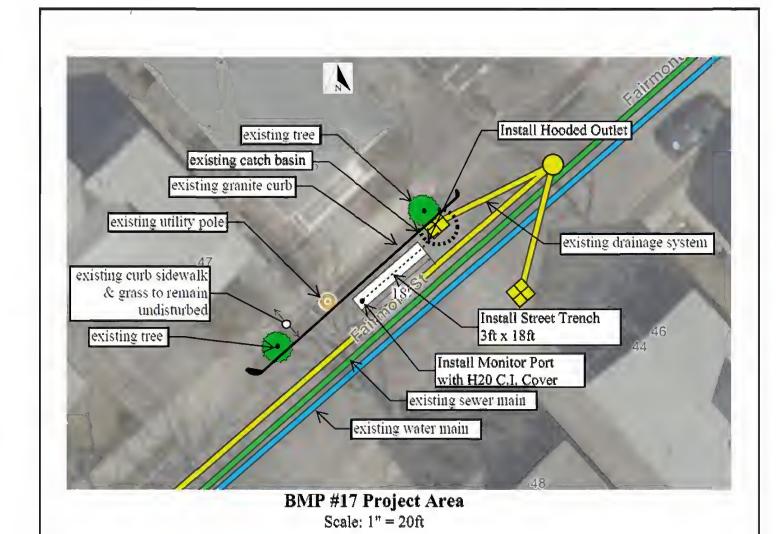


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BMP #16: Street Trench Location: 44-46 Fairmont St.

Trench Criteria: Length = 18 feet Width = 3 feet

	Design Elevations:
0.00	Elevation: Existing Rim =
-2.79 ft	Ex. Invert Out =
-3.04 ft	Prop. Inv.Trench =
-0.33 ft	Top of Stone =
-5.00 ft	Bottom Trench =



NOTES: 1) This BMP Project utilizes an independent datum based on the existing catch basin elevation. 2) Use Standard Street Trench Infiltration System Detail Sheet to construct trench at specified location above.

BMP #17: STREET TRENCH Location: 45 Fairmont St.



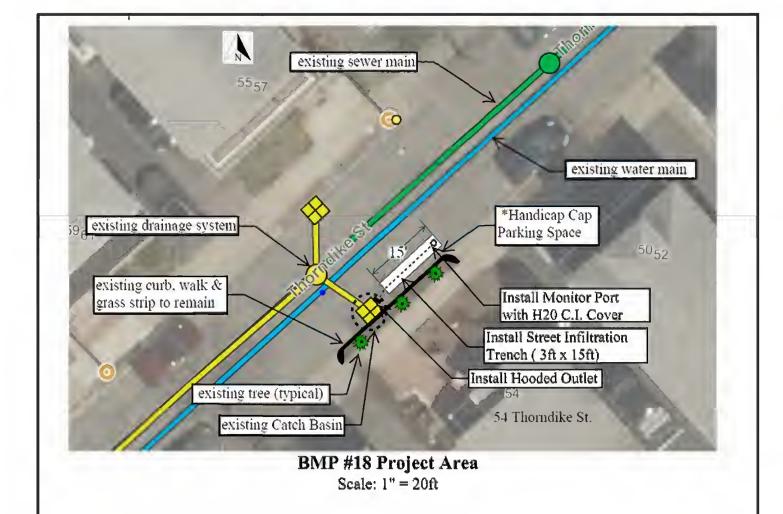
Date: January 29, 2019

TOWN OF ARLINGTON Department of Public Works **Engineering Division** 51 Grove Street

BMP #17: Street Trench Location: 45 Fairmont St.

Trench Criteria: Length = 18 feet Width = 3 feet

Design Elevations:			
Elevation: Existing Rim =	0.00		
Ex. Invert Out =	-2.42	ft	
Prop. Inv.Trench =	-2.67	ft	
Top of Stone =	-0.33	ft	
Bottom Trench =	-5.00	ft	



NOTES:

1) This BMP Project utilizes an independent datum based on the existing catch basin elevation. 2) Use Standard Street Trench Infiltration System Detail Sheet to construct trench at specified location above. \* 3) Extra care and communication shall be used to coordinate alternative parking for the Handicap Parking

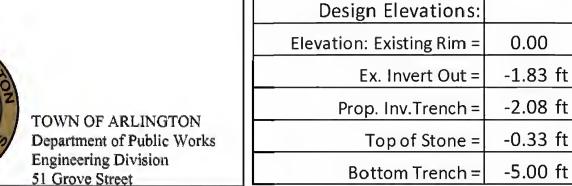
BMP #18: STREET TRENCH Location: 54 Thorndike St. Date: January 29, 2019

Space located in front of 54 Thorndike St.



BMP #18: Street Trench Location: 54 Thorndike St.

Trench Criteria: Length = 15 feet Width = 3 feet



lo.	Revision/Issue	Date

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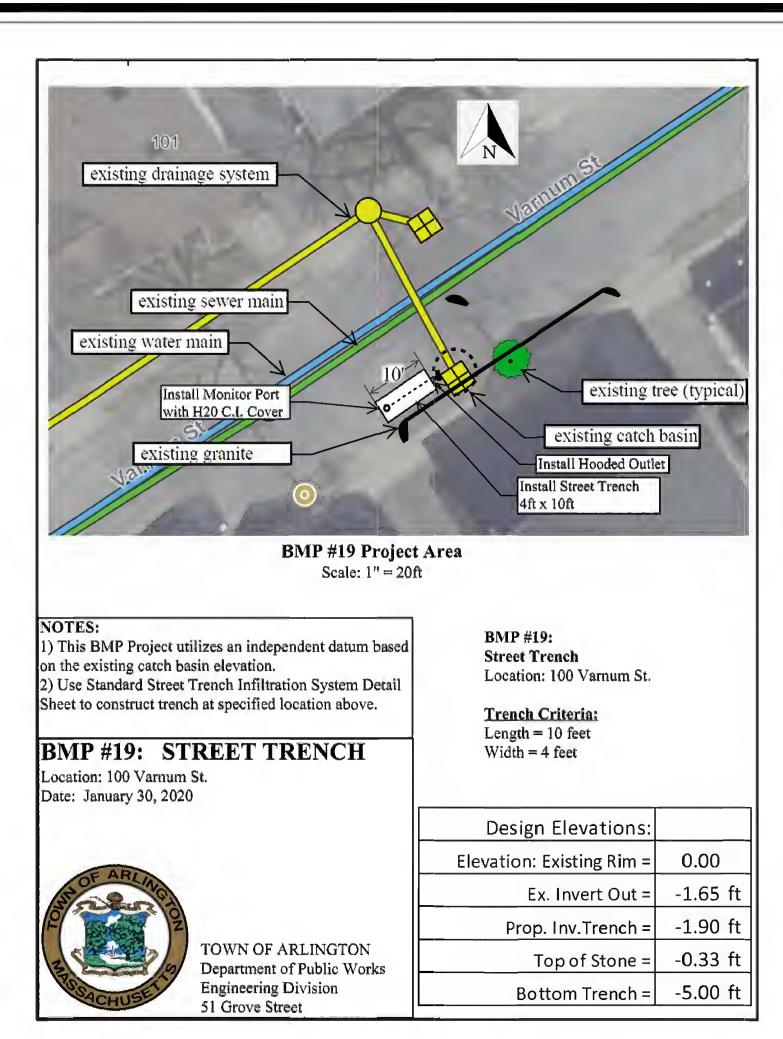
#### Town of ARLINGTON

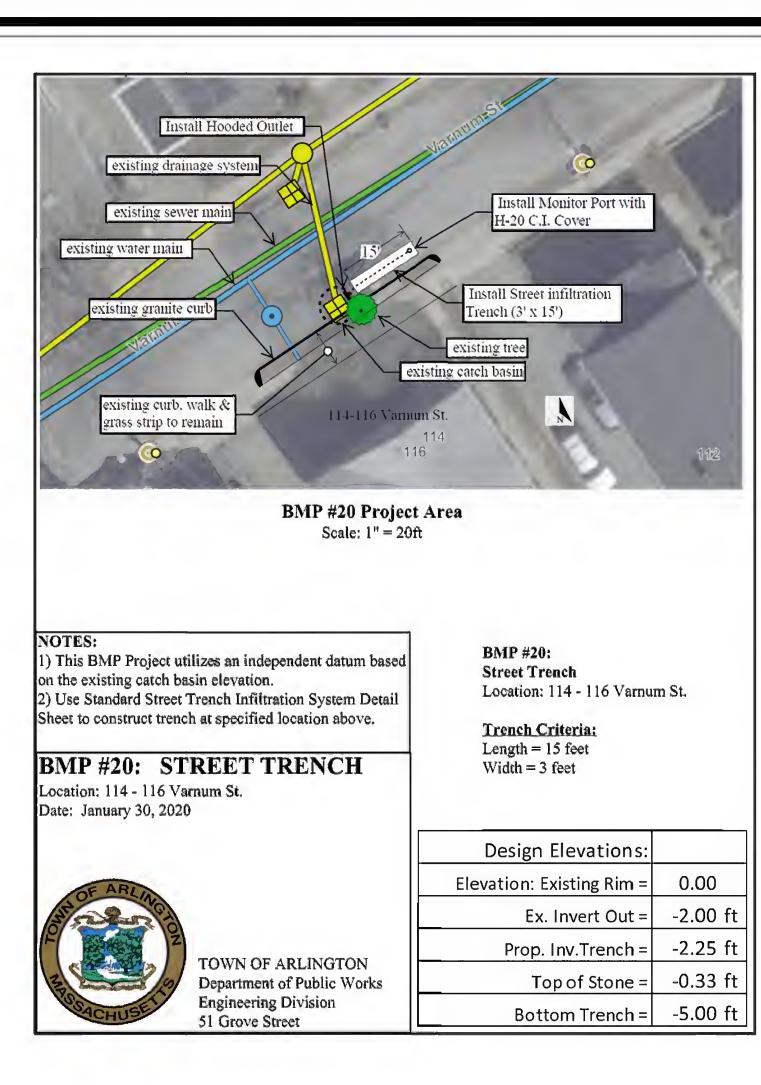
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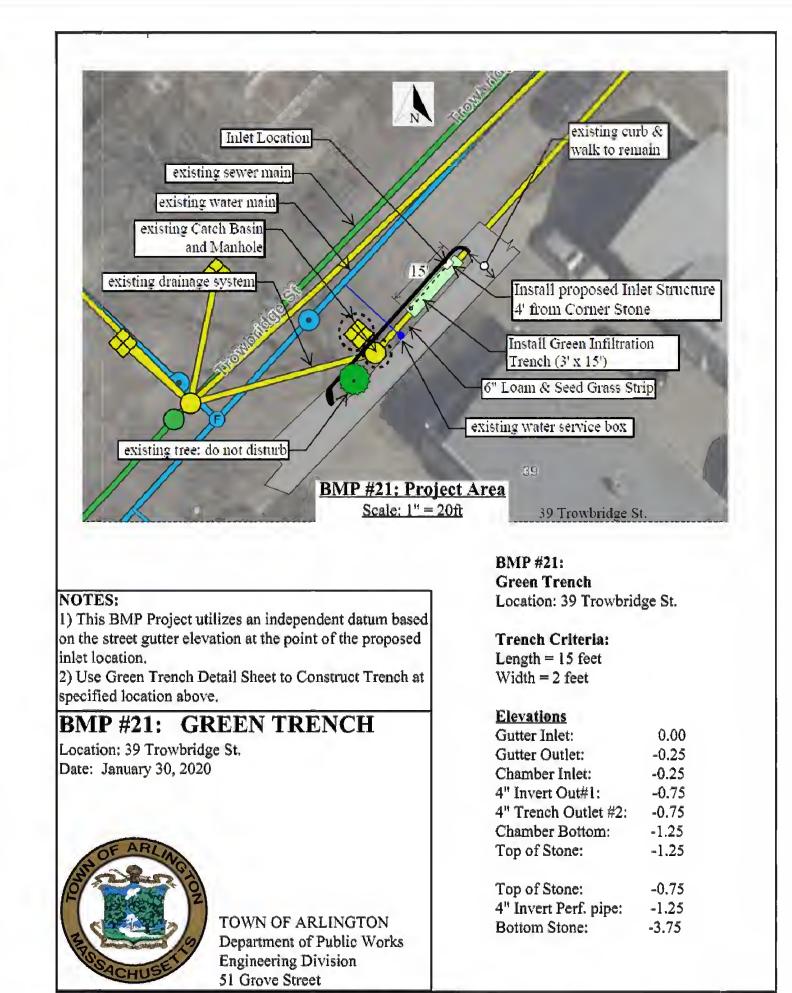
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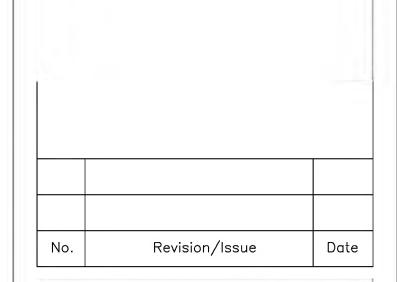
**BMP #13 TO #18** 

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NOTES

### Town of ARLINGTON

-Engineering Division
51 Grove Street
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2020 GREEN
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**BMP #19 TO #21** 

#20-09

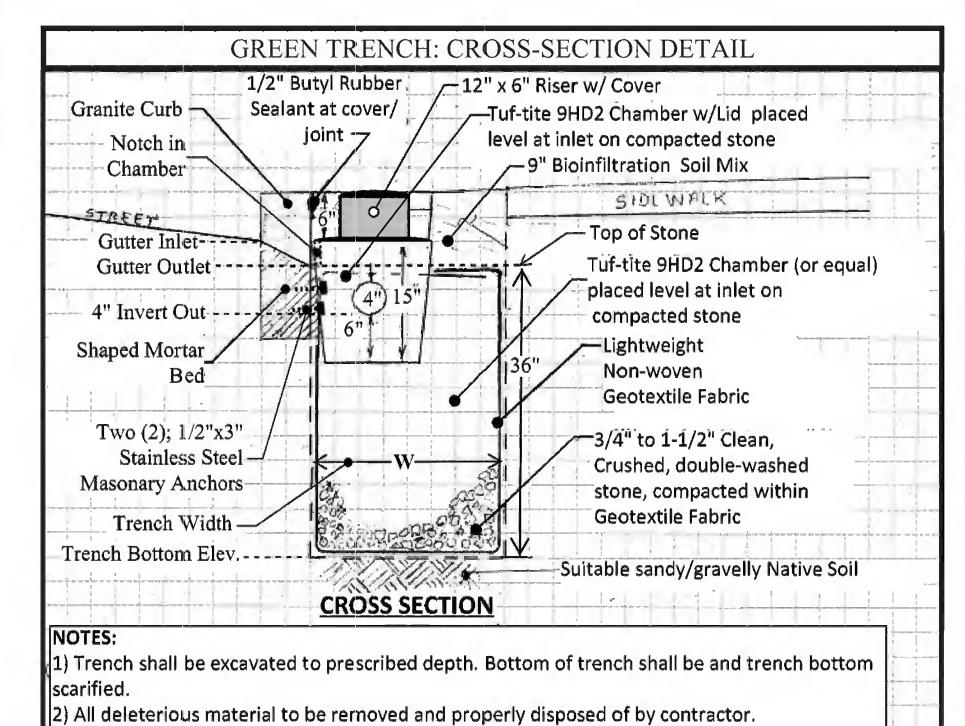
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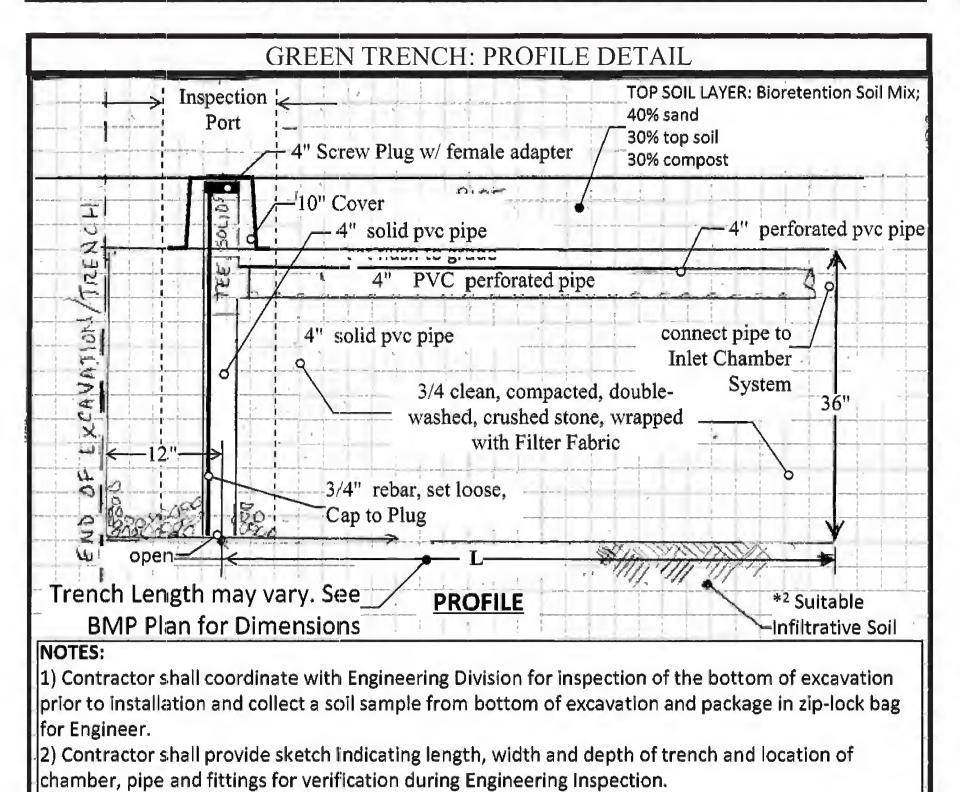
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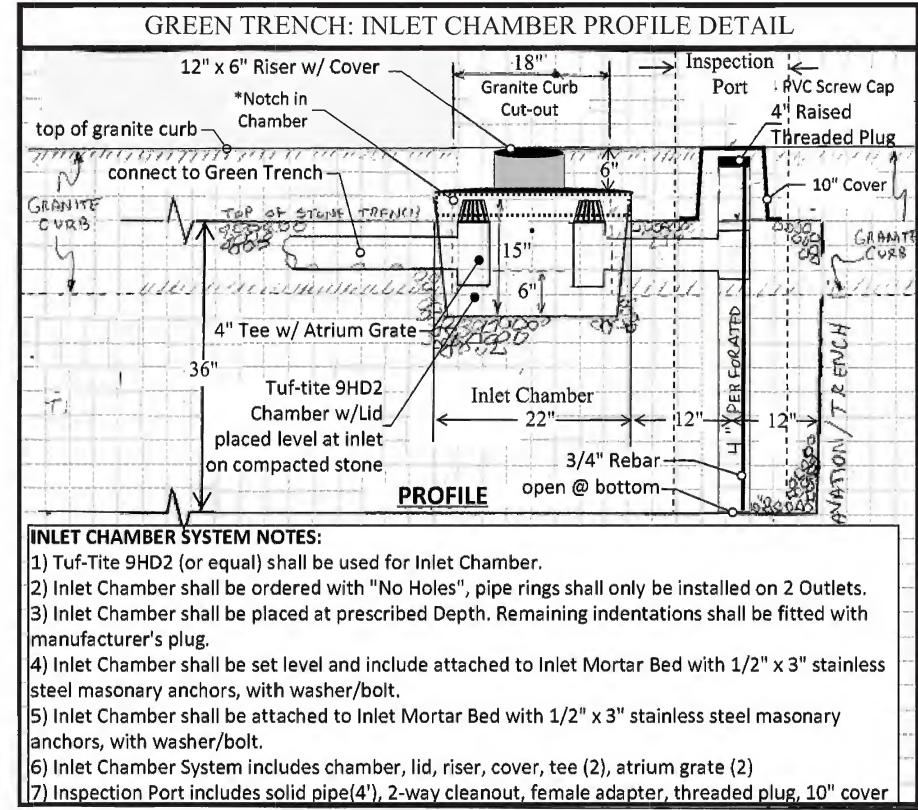
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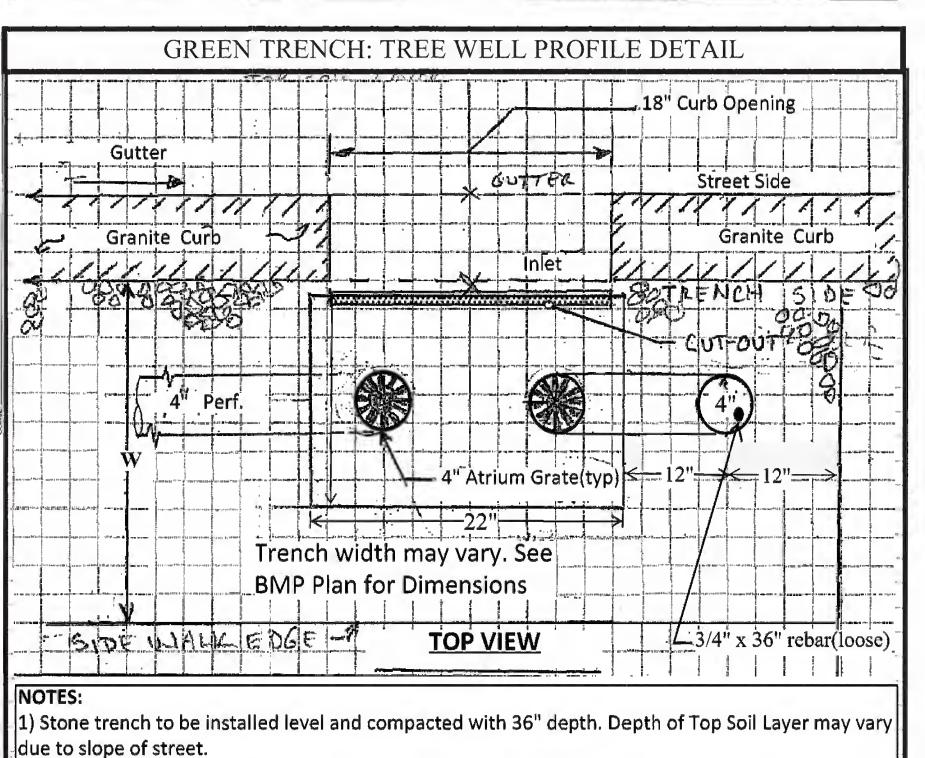
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3) All surfaces shall be placed back to original surface condition upon completion of trench.







2) Top Soil Layer shall slope toward street to prevent ponding.

No. Revision/Issue Date

NOTES

# Town of ARLINGTON

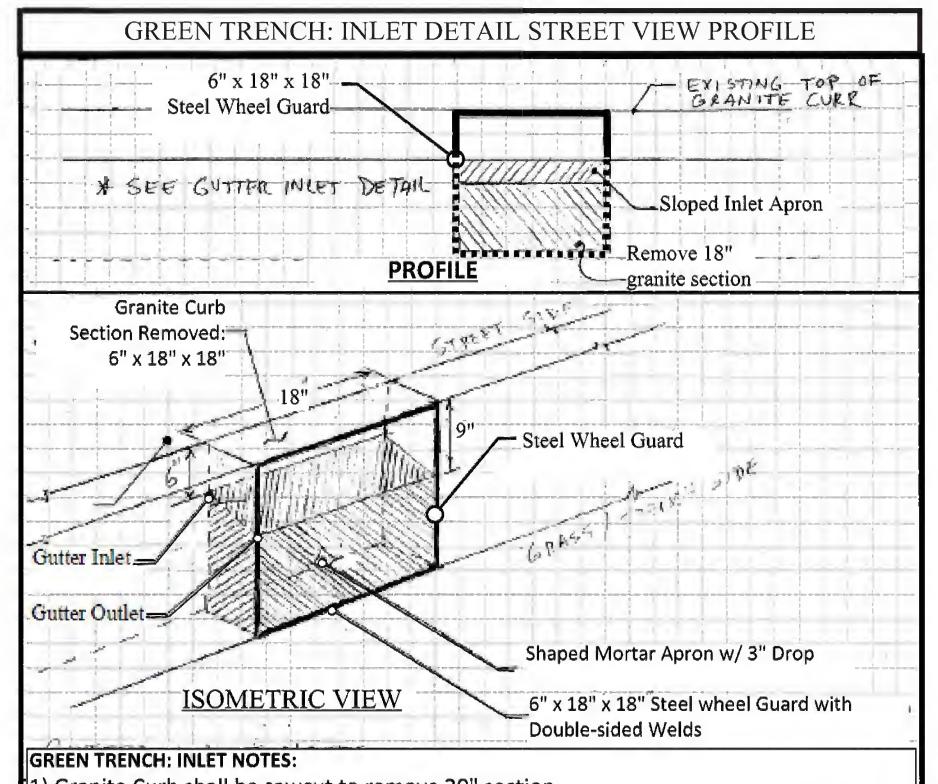
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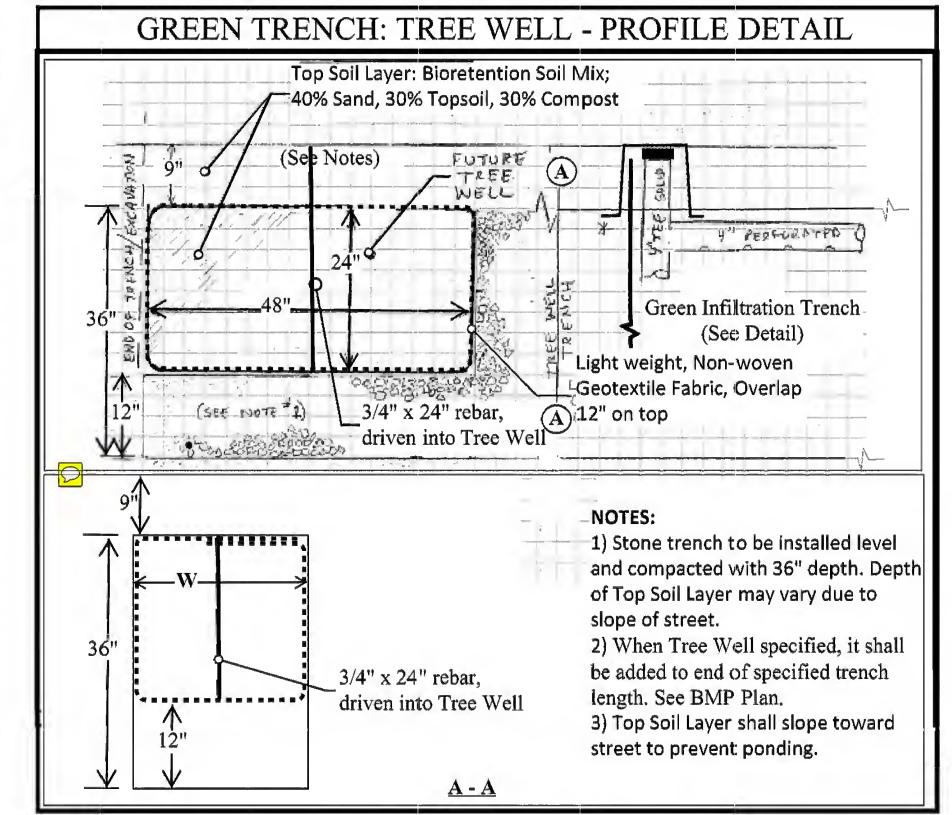
TRENCH DETAILS

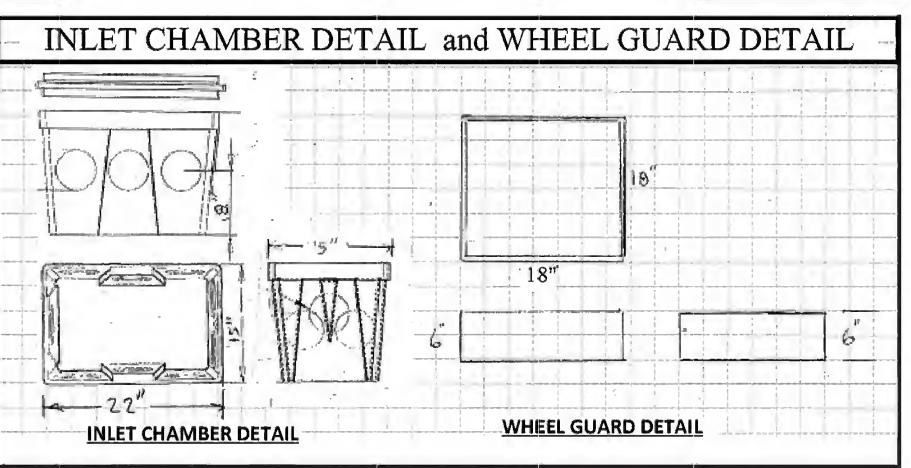
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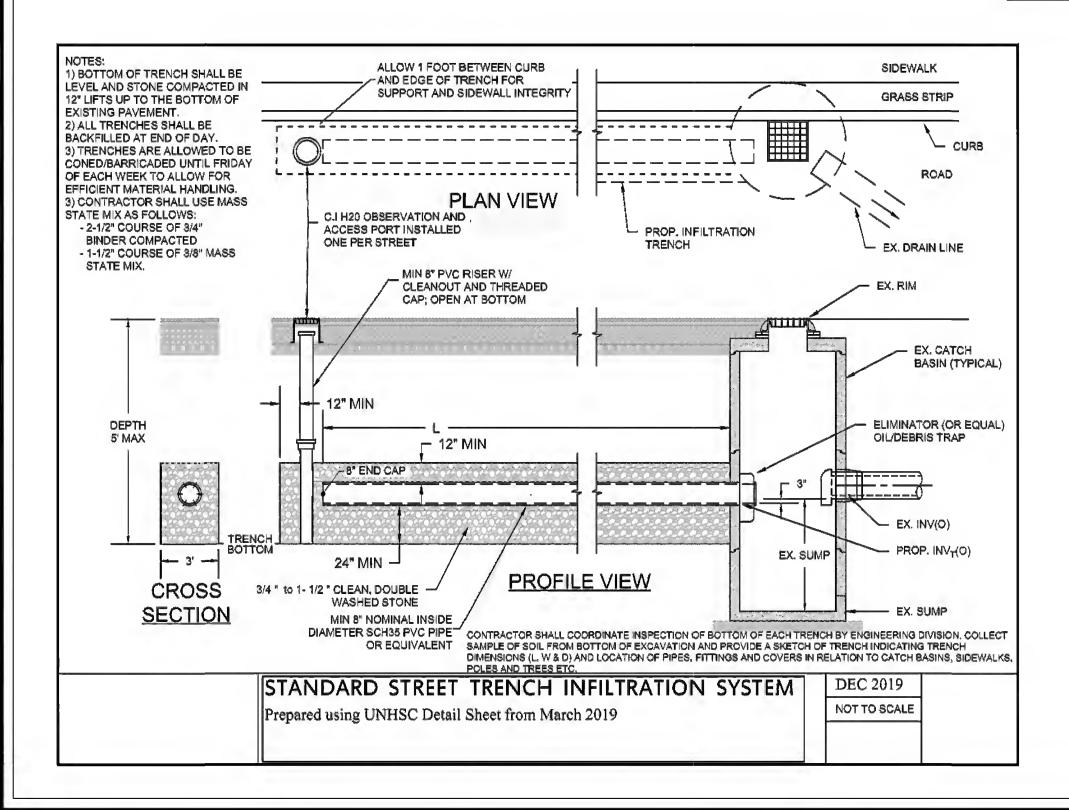
FEBRUARY 2020



- 1) Granite Curb shall be sawcut to remove 20" section.
- 2) 18" x 18" x 6" welded steel wheel guard (one-piece) shall be installed with top flush to existing granite curb in opening as detailed.
- 3) Wheel Guard shall be set flush to existing curb and filled with Type-S mortar to lock in frame. Top of Mortar Bed inside Wheel Guard shall be shaped to slope three (3) inches from street gutter to back of wheel guard to form the Inlet Apron (3000 psi) required.
- 4) Wheel Guard edges at granite curb shall be pointed with mortar.
- 5) Inlet Chamber shall be set tight against backside of wheel guard on compacted crushed stone consistent with Green Trench Inlet Details.
- 6) Inlet Chamber shall be marked at inlet apron and an 18" notch shall be be cut into chamber riser at Inlet Apron. Cut shall be straight and clean.
- 7) Inlet Chamber shall be set with 6" x 18" notch aligned with Inlet Apron. Inlet Chamber to be held in place by backfilled stone on back-side and void between granite curb and Inlet Chamber filled with Type-S mortar.
- 8) Wheel Guards to be manufactured from 1/2"x6" A36 Steel. Double welded at each









NOTES

Arlington, MA 02476

**2020 GREEN** INFRASTRUCTURE IMPROVEMENT PROJECT

TRENCH DETAILS

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